REMARKS

Claims 1-31 are pending in the above captioned application. Claims 15 and 20-31 have been withdrawn from consideration. Claim 32 has been cancelled. Claims 1-14 and 16-19 stand rejected. No claims are herewith added or deleted. Claims 1-10 and 16-19 are herewith amended. Support for the amendments whereby EDG8 biological activity is defined as "increasing intracellular Ca^{2+} concentration upon binding to S1P and/or LPA and/or dHS1P and/or related lysophospholipid mediators" can be found in the description of Figures 2 and 3 in the specification at page 8. No new matter is added with the amendments.

Rejections under 35 USC § 112, first paragraph

In the Office Action at page 2 (item 6), the Examiner has rejected claims 1-4, 8, 10-14 and 16-19 for lack of enablement under 35 U.S.C. 112, first paragraph. The Examiner argues that the specification does not provide "guidance needed to predictably alter the amino acid sequence of SEQ ID NO:2" to have a functional EDG8 protein, without undue experimentation. Applicants respectfully traverse this rejection.

Applicants acknowledge that experimentation is required to determine amino acid sequences that are encompassed by the claims. However, applicants take issue with the Examiner's characterization of such experimentation as being "undue." Applicants teach the basic structural templates for comparison (SEQ ID No: 2 and SEQ ID No: 1) and methods for assaying molecules with EDG8 activity. Applicants also define what is meant by EDG8 activity. Applicants also define what is meant by a fragment and provide a range of lengths of fragments. Applicants also teach methods for mutating the recited sequences and also rely upon what is known to the skilled artisan, which is proper and acceptable. The specification teaches all of those things. The

specification, in view of what was known in the art at the time of the invention, fully enables the claimed invention.

In order to advance this case to allowance, however, applicants herewith amend claim 1 to further define "EGD8 biological activity." Specifically, the claims now recite "EGD8 biological activity, **which increases intracellular Ca^{2+} concentration upon binding to S1P and/or LPA and/or dHS1P and/or related lysophospholipid mediators."**

In view of this amendment, applicants respectfully request withdrawal of this rejection.

Rejections under 35 USC § 112, second paragraph

On page 3-4 (item no. 7), of the Office Action, the Examiner has rejected claims 1-14 and 16-19 for indefiniteness under 35 USC. 112, second paragraph. The Examiner maintains his rejections for reciting "EDG8" as a limitation in the claims. The Examiner states if EGD8 biological activity refers to the ability to function as a SIP receptor, then the claims should refer to an "S1P receptor" instead of "a polypeptide with EGD8 biological activity".

Applicants believe this rejection is rendered moot with the above amendments. Withdrawal thereof is respectfully requested.

On page 4-5, (item no. 8), of the Office Action, the Examiner also has rejected claims 1-14 and 16-19 for indefiniteness for using the word "about". Applicants traverse this rejection and point out that "about" retains it's common meaning. It is not vague. However, in order to advance allowance, applicants have deleted the word "about" from the claims. Withdrawal of this rejection is therefore respectfully requested.

Rejection under 35 USC § 102(b)

On page 5, (item 9) of the Office Action, the Examiner has maintained rejections of claims 1 to 14 and 16 to 19 under 35 USC. §102(b) as allegedly being anticipated by Glucksmann et al. (WO 00/11166) and Behan et al. (WO 00/22131).

Glucksmann and Behan describe a sequence "related to" the EDG receptor family; however, neither reference teaches any specific function or activity of "EDG8" or polypeptides or any functional residue derived therefrom.

In order to further clarify the invention and to distinguish it over the disclosures of Glucksmann and Behan, applicants have amended the rejected claims to recite a **"which increases intracellular Ca^{2+} concentration upon binding to S1P and/or LPA and/or dHS1P and/or related lysophospholipid mediators"**. Applicants respectfully request withdrawal of the rejection in view of this amendment.

With regard to claim 9, applicants have amended this claim to remove "at least 10 bases." The recitation of the number of bases should not be necessary in view of the more detailed description of the biological activity. Although Glucksmann and Behan recite sequences greater than 10 bases in length, as the Examiner has pointed out, neither reference discloses a **fragment** of the full sequences and neither discloses a fragment that has the recited biological function. Accordingly, applicants respectfully request withdrawal of the rejection of claim 9 and any claim dependent therefrom.

CONCLUSION

In view of the above arguments and amendments, applicants assert that the pending claims are in condition for allowance, respectfully request that all objections and rejections be withdrawn and that a notice of allowance be forthcoming. The Examiner is invited to contact the undersigned attorney for applicants at 202-912-2142 for any reason related to the advancement of this case.

Respectfully submitted,

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